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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/662,567   | 09/15/2003  | John Dennis Clark    | BRADBURY/10003      | 9742             |
| 34431  | 7590        | 08/18/2005           | EXAMINER            |                  |
| HANLEY, FLIGHT & ZIMMERMAN, LLC<br>20 N. WACKER DRIVE<br>SUITE 4220<br>CHICAGO, IL 60606 |             |                      | CRANE, DANIEL C     |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 3725                |                  |

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/662,567

Applicant(s)

CLARK, JOHN DENNIS

Examiner

Daniel C. Crane

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 38,39,41-47,49-55,57-86 and 88-117 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38,39,41-47,49-55,57-86 and 88-117 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/22/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## **NEW ART**

New art has come to the examiner's attention; therefore the following office action is herein made of record. Any indication of allowable subject matter is withdrawn.

## **REJECTION OF CLAIMS OVER PRIOR ART**

Claims 38, 39, 42-47, 50-55, 58-75, 77, 81-85, 88-94, 97, 98, 101, 103-105, 109, 111-113, 116 and 117 are rejected under 35 U.S.C. 102(b) as being anticipated by Bradlee (4,794,773). See Figure 3 where sensors 40, 42 senses readings of travel length of the strip material 10 and adjusts the load applied to the material by rollers 82 so as to modify the condition of the material (column 6, lines 33-45). Since the work rolls 82 are controlled via computer in a manner as taught by Bradlee ('458), the work rolls can be adjusted vertically and axially (or centrally) (see Figures 4 and 9 of Bradlee ('458)). Peak values are automatically obtained when the highest values are determined as the sheet material is severely deflected. Accordingly, peak values and adjustments relating to those sensed conditions are inherently performed by Bradlee. Since the readings are determined between reference lines on the sheet material, the distance between the first and second sensor readings is determined. As to claim 94, see Bradlee ('458) at column 8, lines 36-40. Claim 104 can be broadly read because the "I-unit" has not been defined.

Claim 76, 78-80, 86, 95, 96, 99, 100, 102, 106-108, 110, 114 and 115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradlee (4,794,773). Use of average sensed conditions in the art is well known so as to limit the amount of high and low readings. This

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facilitates a more accurate picture of the sensed conditions. Accordingly, such a provision within Bradlee's method and apparatus so as to prevent inaccurate readings and to facilitate better operation would have been obvious to the skilled artisan as well known. While Bradlee shows a contact type sensor, it is known in the art to use non-contact sensors, such as laser mechanisms, to obtain the same sensed condition. Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Bradlee's roll sensors by using a non contacting type sensor so as to eliminate the need to contact the material and reduce any marring of the material.

Claims 61-63, 69-72, 74, 75, 77, 79- 82, 84-86, 88, 89, 91, 92, 96, 98, 101, 103, 104, 108, 109, 113, 115, 116 and 117 are further rejected under 35 U.S.C. 102(b) as being anticipated by Jeuniaux (5,465,214). Figures 1 and 2 show where a plurality of sensor readings in the form of deviations is obtained by a plurality of laser mechanisms 8 arranged along the width of the material 3. Deviations are obtained in light of the fact that the measurements are taken from a distance away from the material to the material and determined relative to the reference surface Ox (Figure 2).

Claims 38, 39, 41-55, 57-60, 64-68, 73, 76, 78, 83, 90, 93, 94, 95, 97, 99, 100, 102, 105-107, 110-112 and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeuniaux (5,465,214). The comments set forth in the preceding paragraph are incorporated herein. While Jeuniaux does not obtain the travel length of the material as the material moves, Jeuniaux does obtain the speed of the material and correlates that with the distance readings. In this regard, the

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speed-reading and the length reading are comparable as both of the sensed conditions are used to provide a location of the condition of the material and any non-planarity sensed in the material. Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Jeuniaux's machine by using a length measurement instead of a speed measurement to specify a location on the material would have been a matter of preference and dictated by the hardware availability. Further, because of the equivalent information being obtained and the identical result acquired, i.e., location on a moving material, this is considered obvious to the skilled artisan having the level of skill within the computer controlled rolling art. Since a flatness or planarity of the material is being obtained, a "certification level" of the material is obtained. Topographical information is determined because the curvature of the material is sensed.

## **RESPONSE TO APPLICANT'S COMMENTS**

Applicant points out that claim 38 defines over Bradlee because Bradlee does not determine a deviation value of the material. Contrary to applicant's argument, Bradlee clearly determines a deviation value to determine the result of equation (8) (See column 5). In this regard, vector A and vector B is continuously obtained during the operation of the system and a "deviation" is calculated to determine the center radius of curvature  $R_C$ . Accordingly, Bradlee does determine a "deviation value associated with the condition of the material through a plurality of sensor readings".

As to the applicability of Bradlee against claim 72, this is also considered tenable because the distance determination is obtained through pulses generated by the sensors 40, 42 so that the

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distances of the vectors A and B can be used in the calculation of the radius of curvature (see column 5, lines 15-25). Therefore, Bradlee does provide a sensor 40 and 42 that “detects a distance to a surface of the moving material” (emphasis added). The “distance to a surface of a material” is the “distance” that is shown in Figure 3 as vector A (72) and vector B (74). The claims can be broadly read and this interpretation does not preclude a reading on a “distance” that is measured along the surface to a particular point on the surface of the material. Accordingly, a “distance to a (point on the) surface” of the material is sensed. This argument similarly applies to claim 92. With respect to those claims specifying steps of obtaining first and second deviation values, Bradlee also performs these operations since Bradlee’s measurements of the deviations are performed continuously through the computer program, such being based on the sensed conditions.

With reference to claim 109, Bradlee is applicable. As mentioned in the previous paragraph, Bradlee’s sensed readings are obtained continuously with these readings varying instantaneously and with comparisons between the measured values also being made successively. Keeping this in mind, Bradlee performs successive reading for the vector A and successive readings for the vector B, the vector A being a first zone and the vector B being a second zone. These readings deviate from one another because the material is being constantly shaped by adjustable leveler rolls, which impart a different radius of curvature to the material thus resulting in different readings by the sensors 40 and 42.

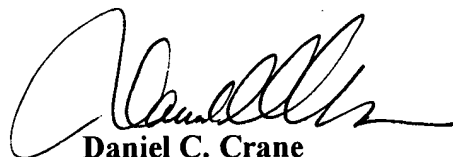
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## **INQUIRIES**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is **(571) 272-4516**. The examiner's office hours are 6:30AM-5:00PM, Tuesday through Friday. The examiner's supervisor, Mr. Derris Banks, can be reached at **(571) 272-4419**.

Documents related to the instant application may be submitted directly to Group 3700 by facsimile transmission at all times. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Group 3725 Facsimile Center number is **(571) 273-8300**. The examiner's FAX no. is **(571) 273-4516**.

DCCrane  
August 12, 2005



**Daniel C. Crane**  
Primary Patent Examiner  
Group Art Unit 3725